

VXI & PXI Platforms in Switching Applications

How to Migrate and Cross-Reference

VXI:

VME eXtensions for Instrumentation (VXI) is an open standard platform for automated test based on the modular VME computer bus. Introduced in 1987, this modular chassis-based architecture reduced the size and increased the performance of high-end test systems. VXI systems provided higher data transfer rates and real-time performance not possible with rack-and stack systems, and were principally successful in the military and aerospace markets. However, VXI is now over 30 years old and many of the leading T&M companies are now no longer supporting the standard.

PXI:

Today, more test systems designers are choosing the PCI eXtensions for Instrumentation (PXI) platform when designing new modular test systems or replacing or updating existing test systems such as VXI. Originally introduced in 1997, PXI is an open T&M standard now supported by almost 70 companies working under the umbrella of the PXI Systems Alliance (PXISA), which publishes the PXI specification and ensures instrumentation interoperability. Pickering Interfaces is one of six current Board level members of the PXISA.



The main advantages of PXI compared to VXI:

- **Availability.** PXI's biggest advantage over VXI is product availability—Pickering alone has a catalog of over 1000 PXI modules. Practically all VXI instruments now have functionally equivalent options in PXI, and far fewer new VXI modules are being developed. The Consortium that manages the VXI specification is now down to just ten members, and even we have dropped our VXI line due to key part obsolescence and reduced market requirements.
- **Lower cost.** Hardware costs are lower for PXI than VXI. PXI is based on the PCI bus used in many personal computers and can take advantage of the modern PC marketplace and its readily available components. PXI systems typically cost one-half to one-third of an equivalent VXI system.
- **Data throughput.** The most common version of the PCI bus has a peak bandwidth of 132 MB/s and is the implementation employed in the majority of PXI systems—this data bandwidth performance easily exceeds the performance of the older VXI test standard. In addition, PXI Express, based on the multi-gigabytes per second data throughput of the PCI Express serial bus architecture, was introduced as an extension to the PXI standard in 2005 to support the latest bandwidth-hungry instrumentation.
- **Size.** PXI modules are significantly smaller than functionally equivalent VXI modules, which reduces test system footprint and allows developers to incorporate more functionality into their test systems.



1000+
Pickering
PXI Modules

PXI

VXI & PXI Platforms in Switching Applications

Making the right choice

While the availability of PXI modules makes the choice relatively easy, there is the issue of migrating test programs from VXI to PXI, specifically in switching applications.

To help ease this transition, we have developed PXI switching and simulation modules that closely match the operation of VXI switching modules from Racal (EADS/Astronics), VTI Instruments, Keysight (Agilent, HP), Ascor, Cytec, Tek, and other manufacturers. And, our policy of supporting our PXI Switching products for 15 to 20 years, or even longer, means that your next-generation test systems will have as long a life as their predecessors.

Migration issues

While PXI is clearly the modular platform of choice when designing new test and measurement systems or upgrading existing systems, you may encounter some issues when doing so:

Module real estate. A C-size VXI module has a lot more space to mount components on than a PXI module, meaning that some VXI modules may have more features or functionality than the PXI modules you choose to replace them. Generally, however, VXI module designs are not as dense as today's PXI modules, and so this is usually not an issue.

Cabling. VXI modules have a wider front panel (1.188 inches) than PXI modules (0.8 inches)—meaning that many of the connectors used in VXI systems cannot be used in a PXI system. So, plan on building or buying new cables or buying adaptors. Our standard range of **Cables & Connectors** includes **1200+ Connection Solutions**, and our free on-line Cable Design tool will help on custom connectivity requirements.

NEW - Pickering's Cable Design Tool

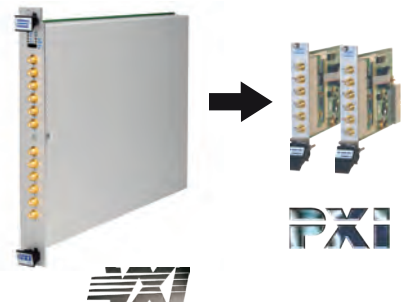


Go to pickeringtest.com/cdt to find out more.

Software. Unfortunately there is no easy way to migrate VXI test programs to PXI. But, given the number of test-development software packages available for the PC platform, this may not be as big an obstacle as it might appear.

The Cross-Reference Tables

The Pickering PXI modules referred to in the following tables are in many cases a close equivalent to the VXI models (because of the large PCB real estate of C-Size VXI modules, channel counts may be different). Specifications may not be exactly the same, depending on your application, a different Pickering PXI module may be closer to your requirements than what is shown here; please contact our Support team for more assistance in finding the correct module for your requirements.



RACAL (EADS/Astronics) - VXI to PXI Switching Cross-Reference

RACAL (EADS/Astronics) Legacy VXI Module				Equivalent Pickering PXI Module		
Switch Type	Part No.	Configuration	Specification	Part No.	Configuration	Specification
Multiplexer	Racal 1260-x138	8 Bank / 8 Channel / 2 Pole	2Amp	40-613-002	Versatile 2-Pole MUX	2Amp
Matrix	1260-40A	24x4, 2-Pole	Max Voltage: 250VDC/AC, Max Current: 1A, Max Power: 30W/62.5VA, Max Frequency: 20MHz	40-519A-002	32x4 2-Pole	Max Voltage: 300VDC/250AC, Max Current: 2A, Max Power: 60W/62.5VA, Max Frequency: 10MHz
	1260-40B	12x8, 2-Pole		40-518A-002	16x8 2-Pole	
	1260-40C	Dual 12x4, 2-Pole	40-511-022	Dual 12x4 2-Pole	Max Voltage: 150VDC/100AC, Max Current: 1A, Max Power: 20W, Max Frequency: 25MHz	
	1260-43	Triple 24x8, 2-Pole	Max Voltage: 220VDC/250AC, Max Current: 2A, Max Power: 60W/62.5VA, Max Frequency: 40MHz	40-586A-001	Dual 32x8 2-Pole	Max Voltage: 300VDC/250AC, Max Current: 2A, Max Power: 60W/62.5VA, Max Frequency: 15MHz
	1260-45	Quad 16x4, 2-Pole	Max Voltage: 250VDC/AC, Max Current: 1A, Max Power: 30W/62.5VA, Max Frequency: 25MHz	40-534A-022	Dual 32x4 2-Pole	Max Voltage: 150VDC/100AC, Max Current: 0.5A, Max Power: 10W
Power	1260-16A	64-Channel SPDT	Max Voltage: 110VDC/250AC, Max Current: 6A, Max Power: 180W/1500VA, Max Frequency: 10MHz	40-156-001	16-Channel SPDT	Max Voltage: 400VDC/250AC, Max Current: 5A, Max Power: 175W/1250VA, Max Frequency: >20MHz
	1260-20	20-Channel DPST	Max Voltage: 250VDC/380AC, Max Current: 8A, Max Power: 150W/12000VA, Max Frequency: 30MHz	40-160-002	10-Channel DPST	Max Voltage: 125VDC/250AC, Max Current: 8A, Max Power: 240W/2000VA, Max Frequency: 10MHz
	1260-22	40-Channel SPST	Max Voltage: 250VDC/AC, Max Current: 20A, Max Power: 600W/4800VA, Max Frequency: 300kHz	40-161-001	16-Channel SPST	Max Voltage: 300VDC/250AC, Max Current: 16A, Max Power: 448W/4000VA, Max Frequency: 20MHz
	1260-22A	Multiplexer, Five 1x4 and Ten 2x1		40-662-001	Multiplexer, 4 Bank 4:1	Max Voltage: 300VDC/250AC, Max Current: 16A, Max Power: 448W/4000VA, Max Frequency: 10MHz
RF	1260-50D	Sixteen 1x4	Max Voltage: 200VDC/AC, Max Current: 0.5A, Max Power: 10W, B/W: 350MHz	40-755-010	Ten 1x4	Max Voltage: 200VDC/AC, Max Current: 1A, Max Power: 10W, B/W: 500MHz
	1260-51	Six 2x6, Three 2x2 or One 2x36	Max Voltage: 110VDC/125VAC, Max Current: 0.5A, Max Power: 30W/62.5VA, B/W: 400MHz	No Equivalent	—	—
	1260-54	Six 1x4s	Max Voltage: 30VDC/100VAC, Max Current: 1.5A, Max Power: 40W, B/W: 1.3GHz	40-755-110	Ten 1x4	Max Voltage: 200VDC/AC, Max Current: 1A, Max Power: 10W, B/W: 1.8GHz
	1260-58	Four SP8T	Max Voltage: 24VDC/24VAC, Max Current: 10mA, Max Power: 10W, B/W: >1GHz	40-784A-002	Two SP6T	Max Voltage: 30VDC/AC, Max Current: 0.5A, Max Power: 10W, B/W: 6GHz
Microwave 50Ω	1260-67M	SPDT, SP4T, SP6T, Transfer	Max Frequency: 26.5GHz Max Power: 3W@26.5GHz	40-784A-033	3xSP6T	Max Voltage: 100V, Max Current: 1A, Max Power: 40W, Max Frequency: 26.5GHz
Special RF	1260-93A	93Ω, Eight 1x4	Max Voltage: 100V AC/DC, Max Current: 0.5A (1260-93A) 1A (1260-93B), Max Power: 100W, Max Frequency: 100MHz	No Equivalent	—	—
	1260-93B	93Ω, Sixteen 1x4		No Equivalent	—	—
Digital Test	1260-14	96 Discrete I/O, TTL	Max Voltage: 5.25V, Max Current: 15mA source/48mA sink, Max Power: 252mW, Max Frequency: 1 kHz w/Opt 01 or 200 kHz w/Opt 01T	40-410-001	32 Discrete I/O, TTL	Max Voltage: 7V, Max Current: 0.4mA source/8mA sink, Max Power: 56mW, Max Frequency: >100kHz
	1260-14 (CMOS)	96 Discrete I/O, CMOS	Max Voltage: 5V, Max Current: 6mA source or sink, Max Power: 30mW, Max Frequency: 1 kHz w/Opt 01 or 200 kHz w/Opt 01T	No Equivalent	—	—
	1260-14C	96 Discrete I/O, open-collector	Max Voltage: 32V, Max Current: 200mA sink, Max Power: 6.4W, Max Frequency: 1 kHz w/Opt 01 or 200 kHz w/Opt 01T	40-410-002	32 TTL Inputs, 32 Open Collector Outputs	Max Voltage: 50V Open Collector, Max Current: 20mA sink, Max Power: 25W, Max Frequency: >100kHz

VTI Instruments VXI to PXI Switching Cross-Reference

VTI Instruments SMP family comprises various switching modules and VXI Carrier cards. Depending on the model, the carrier cards can hold up to six SMP Modules. As there are a very large number of configurations possible, the chart focuses only on the SMP modules.

VTI Instruments Legacy VXI Module				Equivalent Pickering PXI Module		
Switch Type	Part No.	Config.	Specification	Part No.	Config.	Specification
General Purpose	SMP5001	80 SPST	Max Switching Voltage: 300VAC/VDC, Max Switching Current: 2A, Max Switching Power: 60W/125VA, B/W: 100MHz	40-139-101	80 SPST	Max Switching Voltage: 300VAC/250VDC Max Switching Current: 2A Max Switching Power: 60W/62.5VA B/W: 70MHz
	SMP5002	50 SPDT	Max Switching Voltage: 300VAC/VDC, Max Switching Current: 2A, Max Switching Power: 60W/125VA, B/W: 100MHz	40-139-201	52 SPDT	
	SMP5003	26 SP4T	Max Switching Voltage: 300VAC/VDC, Max Switching Current: 2A, Max Switching Power: 60W/125VA, B/W: 100MHz	40-139-201	52 SPDT(3 SPDT switches wired to make SP4T switch)	
	SMP5004	30 SPDT	Max Switching Voltage: 250VAC/30VDC, Max Switching Current: 5A, Max Switching Power: 150W/1250VA, B/W: 50MHz	40-156-001	18 SPDT	Max Switching Voltage: 250VAC/400VDC Max Switching Current: 5A Max Switching Power: 175W/1250VA B/W: 20MHz
	SMP5005	48 SPST	Max Switching Voltage: 250VAC/30VDC, Max Switching Current: 5A, Max Switching Power: 150W/1250VA, B/W: 50MHz			

VTI Instruments VXI to PXI Switching Cross-Reference (continued)

Switch Type	VTI Instruments Legacy VXI Module			Equivalent Pickering PXI Module		
	Part No.	Config.	Specification	Part No.	Config.	Specification
Power	SMP2001A	20 SPST	Max Voltage: 400VAC/125VDC, Max Current: 16A, Max Power: 300W/4000VA, Max Frequency: 20MHz	40-161-001	16 SPST	Max Voltage: 400VAC/250VDC Max Current: 16A Max Power: 448W/4000VA Max Frequency: 20MHz
	SMP2002A	12 SPDT	Max Voltage: 250VAC/125VDC, Max Current: 16A, Max Power: 300W/2000VA, Max Frequency: 20MHz	40-161-101	12 SPDT	
	SMP2003	8 SPDT	Max Voltage: 270VAC/220VDC, Max Current: 20A, Max Power: 600W/5400VA, Max Frequency: 20MHz	No Equivalent	—	—
	SMP2004	12 SPDT	Max Voltage: 270VAC/220VDC, Max Current: 20A, Max Power: 600W/5400VA, Max Frequency: 20MHz	No Equivalent	—	—
	SMP2005	3 SPDT, SP4T	Max Voltage: 270VAC/220VDC, Max Current: 20A, Max Power: 600W/5400VA, Max Frequency: 20MHz	No Equivalent	—	—
	SMP2007	48:1 Mux	Max Voltage: 500VDC, Max Current: 1A hot, 2A carry, Max Power: 25W, Max Frequency: 20MHz	40-331-001	24:1 Mux	Max Voltage: 110VDC/250VAC hot, 750VDC/750VAC cold, Max Current: 5A hot/cold, Max Power: 150W/1250VA, Max Frequency: 5MHz
	SMP2007A	48:1 Mux	Max Voltage: 1000VDC, Max Current: 1A hot, 2A carry, Max Power: 25W, Max Frequency: 20MHz			
	SMP2008	16 DPST	Max Voltage: 500VDC, Max Current: 1A hot, 2A carry, Max Power: 25W, Max Frequency: 35MHz	40-151-002	12 DPST	Max Voltage: 125VDC/250VAC hot, 400VDC/250VAC cold, Max Current: 5A hot/cold, Max Power: 175W/1250VA, Max Frequency: 20MHz
	SMP2009	16 SPDT	Max Voltage: 500VDC, Max Current: 1A hot, 2A carry, Max Power: 25W, Max Frequency: 35MHz	40-156-001	16 SPDT	Max Voltage: 35VDC/250VAC hot, 400VDC/250VAC cold, Max Current: 5A hot/cold, Max Power: 175W/1250VA, Max Frequency: 20MHz
	SMP2012	10 SPST	Max Voltage: 277VDC/220VAC, Max Current: 30A, Max Power: 900W/8000VA, Max Frequency: 20MHz	40-170-001	2 SPST	Max Voltage: 300VDC/250VAC hot, 400VDC/250VAC cold, Max Current: 16A hot/cold, Max Power: 900W/7000VA, Max Frequency: 10MHz
	SMP2104	10 SPST	Max Voltage: 60VDC, Max Current: 20A, Max Power: 1200W	40-161-002	12 SPST	Max Voltage: 300VDC/250VAC hot, 400VDC/250VAC cold, Max Current: 16A hot/cold, Max Power: 448W/4000VA, Max Frequency: 20MHz
	SMP2113	3 SP4T, 1 SPDT	Max Voltage: 28VDC/ 115VAC 400 Hz, Max Current: 25A, Max Power: 700W, Max Frequency: 20MHz	No Equivalent	—	—
	SMP2122	2 SP4T, 2 Dual Ganged SPDT	Max Voltage: 28VDC/ 115VAC 400 Hz, Max Current: 25A, Max Power: 700W, Max Frequency: 20MHz	No Equivalent	—	—
	High Voltage	SMP2300	24 SPST	Impedance: 50Ω, Max Voltage: 750VDC/750VAC peak, Max Current: 1A hot, 2A carry, Max Power: 25W, B/W: >25MHz	40-330-001	24 SPST
SMP2300-93		24 SPST	Impedance: 93Ω, Max Voltage: 750VDC/750VAC peak, Max Current: 1A hot, 2A carry, Max Power: 25W, B/W: >25MHz			
Matrix	SMP4001	9(4x4) 2-Wire	Max Switching Voltage: 300VAC/DC Max Switching Current: 2A Max Switching Power: 60W/125VA B/W: 45MHz	40-518A-002	16x8 2-Wire	Max Voltage: 300VDC/250VAC, Max Current: 2A hot/cold, Max Power: 60W/62.5VA, B/W: 10MHz
	SMP4002	4x36 2-Wire		40-566A-001	55x4 2-Wire	Max Voltage: 150VDC/100VAC, Max Current: 2A hot/cold, Max Power: 60W/62.5VA, B/W: 10MHz
	SMP4003	2(4x16), 1(4x4) 2-Wire		40-519A-002	32x4 2-Wire	Max Voltage: 300VDC/250VAC Max Current: 2A hot/cold Max Power: 60W/62.5VA B/W: 10MHz
	SMP4004	1(8x16), 1(4x4) 2-Wire		40-518A-002	16x8 2-Wire	
	SMP4005	12x12 2-Wire		40-517-002	4x16 2-Wire	
	SMP4006	3(4x12) 2-Wire	Max Switching Voltage: 300VAC/DC, Max Switching Current: 2A, Max Switching Power: 60W/125VA, B/W: 30MHz	40-516-002	8x8 2-Wire	
	SMP4007	2(8x8), 1(4x4) 2-Wire	Max Switching Voltage: 110VAC/125DC, Max Switching Current: 1A, Max Switching Power: 30W/37.5VA, B/W: 50MHz	No Equivalent	—s	—
	SMP4024	2(24x2) 93Ω				
	SMP4028	8(2x8) 1-Wire	Max Switching Voltage: 300VAC/DC, Max Switching Current: 2A, Max Switching Power: 60W/125VA, B/W: 25MHz	40-527-001	64x2 1-Wire	Max Voltage: 300VDC/250VAC, Max Current: 2A hot/cold, Max Power: 60W/62.5VA, B/W: 15MHz
	SMP4044	8x20 Coaxial 50Ω	Max Switching Voltage: 110VAC/125DC, Max Switching Current: 1A, Max Switching Power: 30W/37.5VA, B/W: 50MHz	40-726A-511	12x8 Coaxial 50Ω	Max Voltage: 100VDC, Max Current: 0.5A, Max Power: 10W, B/W: 300MHz
Multiplexer	SMP3001	64x1 1-Wire	Max Switching Voltage: 300VAC/DC Max Switching Current: 2A Max Switching Power: 60W/125VA B/W: >100MHz	40-635-001	64x1 1-Wire	Max Voltage: 300VDC/250VAC, Max Current: 2A hot/cold, Max Power: 60W/62.5VA, B/W: 15MHz
	SMP3001DS	64x1 2-Wire		40-614-010	64x1 1-Wire	Max Voltage: 200VDC/140VAC, Max Current: 2A hot/cold, Max Power: 60W/62.5VA, B/W: 15MHz
	SMP3002	16(1x8) 2-Wire		40-614-016	64x1 2-Wire	
				40-614-004 (2 required)	8(1x8) 2-Wire	

VTI Instruments VXI to PXI Switching Cross-Reference (continued)

VTI Instruments Legacy VXI Module				Equivalent Pickering PXI Module		
Switch Type	Part No.	Config.	Specification	Part No.	Config.	Specification
RF	SMP6301	4 (1x4) 50Ω RF Switches	Max Voltage: 100VAC/30VDC, Max Current: 0.5A, Max Power: 10W, B/W: >1.8GHz	40-755-104	4 (1x4) 50Ω RF Switches	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 1.8GHz
	SMP6204	12 SPDT RF Switches	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >500MHz	40-754-017	17 SPDT RF Switches	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 500MHz
	SMP6203	6 1:4 RF Multiplexers	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >500MHz	40-755-010	10 1:4 RF Switches	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 500MHz
	SMP6202	17 SPDT RF Switches	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >500MHz	40-754-017	17 SPDT RF Switches	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 500MHz
	SMP6201	10 1:4 RF Multiplexers	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >500MHz	40-755-010	10 1:4 RF Multiplexers	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 500MHz
	SMP6144	4x4 RF Matrix	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >1GHz	40-750-521	8x2 RF Matrix	Max Voltage: 60VDC, Max Current: 0.1A, Max Power: 10W, B/W: DC to 1.5GHz
	SMP6122	6 2x2 RF Matrices	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >1GHz	40-784A-033	Dual 2x2 RF Matrices	Max Voltage: 30VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 2.5GHz
	SMP6103	1:31 RF Multiplexer	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >750MHz	40-766-001	1:32 RF Multiplexer	Max Voltage: 30VAC/DC, Max Current: 1A, Max Power: 1W, B/W: DC to 600MHz
	SMP6102	17 SPDT RF Switch	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >1.3GHz	40-754-117	17 SPDT RF Switches	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 1.2GHz
	SMP6101	10 SP4T RF Multiplexer	Max Voltage: 100VAC, Max Current: 0.5A, Max Power: 10W, B/W: >1.3GHz	40-755-010	10 1:4 RF Multiplexers	Max Voltage: 200VAC/DC, Max Current: 1A, Max Power: 10W, B/W: DC to 500MHz
Microwave	SMP7274	Single 6:1 Multiplexer	Max Power: 20W, Max Frequency: 18GHz, VSWR: 1.5:1 @18GHz, Insertion Loss: 0.5dB @18GHz, Isolation: 60dB @18GHz	40-784A-021	Single 6:1 Multiplexer	Max Voltage: 100V Max Current: 1A Max Power: 100W @18GHz Max Frequency: 18GHz VSWR: 1:1.5 @18GHz Insertion Loss: 0.5dB @18GHz Isolation: 60dB @18GHz
	SMP7272	Single 4:1 Multiplexer	Max Power: 20W, Max Frequency: 18GHz, VSWR: 1.5:1 @18GHz, Insertion Loss: 0.5dB @18GHz, Isolation: 60dB @18GHz	40-784A-121	Single 4:1 Multiplexer	
	SMP7374	Single 6:1 Multiplexer	Max Power: 3W, Max Frequency: 18GHz, VSWR: 1.5:1 @18GHz, Insertion Loss: 0.5dB @18GHz, Isolation: 60dB @18GHz	40-784A-021	Single 6:1 Multiplexer	
	SMP7002-2	Single 4:1 Multiplexer	Max Power: 3W, Max Frequency: 40GHz, VSWR: 1.2:1 @40GHz, Insertion Loss: 0.9dB @50GHz, Isolation: 60dB @40GHz	40-784A-141	Single 4:1 Multiplexer	Max Voltage: 100V, Max Current: 1A, Max Power: 4W @40GHz, Max Frequency: 40GHz, VSWR: 1:1.22 @40GHz, Insertion Loss: 1.1dB @40GHz, Isolation: 45dB @40GHz
	SMP7374	Single 6:1 Multiplexer	Max Power: 3W, Max Frequency: 18GHz, VSWR: 1.5:1 @18GHz, Insertion Loss: 0.5dB @18GHz, Isolation: 60dB @18GHz	40-784A-041	Single 6:1 Multiplexer	
Programmable Resistor	SMP7600	1-Channel Programmable Resistor	Max Voltage: 200VAC, Max Current: 0.5A, Max Power: 5W, Range: 0.5Ω-1.5MΩ, Accuracy: 0.15Ω to 60Ω, 0.25% to 1.5MΩ	40-295-121	6-Channel Programmable Resistor	Max Voltage: 100V, Max Current: 0.5A, Max Power: 0.5W, Range: 0-16MΩ, Accuracy: 0.50%

Keysight/Agilent/HP VXI to PXI Switching Cross-Reference

Keysight/Agilent/HP Legacy VXI Module				Equivalent Pickering PXI Module		
Switch Type	Part No.	Config.	Specification	Part No.	Config.	Specification
General Purpose	E1364A	16 SPDT	Max Voltage: 250VDC/AC RMS Max Current: 1A Max Power: 40W/40VA B/W: 10MHz	40-110-021	16 SPDT	Max Voltage: 150VDC/100VAC, Max Current: 0.25A hot, 1A cold, Max Power: 3W
				40-148-001	32 SPDT	Max Voltage: 150VDC/100VAC, Max Current: 1A hot/ cold, Max Power: 60W/62.5VA
	E1442A	64 SPST or SPDT	Max Voltage: 150VDC/AC Peak, Max Current: 1A, Max Power: 40W/40VA, B/W: 10MHz	40-145-101	75 SPST	Max Voltage: 150VDC/100VAC, Max Current: 1A hot/ cold, Max Power: 60W/62.5VA
				40-148-201	64 SPDT	
E1463A	32 SPDT	Max Voltage: 125VDC/AC Peak (Hot) 250V (Cold), Max Current: 5A DC/5AAC RMS, Max Power: 150W/ 1250VA, B/W: 10MHz	40-156-001 (2 Required)	16 SPDT	Max Voltage: 400VDC/AC Peak Cold, 35VDC/250VAC Peak Hot, Max Current: 5A hot/ cold, Max Power: 175W/1250VA, B/W: 20MHz	
Matrix	E1465A	16x16 2-Wire	Max Voltage: 200VDC/170AC RMS, Max Current: 1A DC/ 1AAC Peak, Max Power: 30W/ 62.5VA	40-582-001	16x16 2-Wire	Max Voltage: 150VDC/100VAC, Max Current: 2A hot/ cold, Max Power: 60W/62.5VA, B/W: 10MHz
	E1466A	4x64 2-Wire Latching		No Equivalent	—	—
	E1467A	8x32 2-Wire Latching		No Equivalent	—	—
Multiplexer	E1352A	32:1 FET MUX 1 Wire	Max Voltage: 16VDC/16VAC Peak, Max Current: 1mA, B/W: 500kHz	40-683-001	Configured as 2, 64:1 1Wire	Max Voltage: 100V, Max Current: 125mA, B/W: 10MHz
RF	E1366A	Dual 1x4 50Ω RF Multiplexer	Max Voltage: 42V, Max Current: 1A, Max Power: 24W/ 24VA, B/W: 1.3GHz	40-872-002	Dual 1x4 50Ω RF Multiplexer	Max Voltage: 30V Max Current: 1A Max Power: 10W B/W: 3GHz
	E1473A	6, 1x4 RF 50Ω MUX Extender (Works with E1472A or E1474A)	Max Voltage: 42V, Max Current: 1A DC/ 1AAC RMS, Max Power: 24W/ 24VA, B/W: 1.3GHz	40-872-004	Quad 1x4 50Ω RF Multiplexer (not a MUX extender)	
	E1474A	6, 1x4, 75Ω RF Multiplexer	Max Voltage: 42V, Max Current: 1A DC/ 1AAC Peak, Max Power: 24W/ 24VA	40-832-004	Quad 1x4 75Ω RF Multiplexer	

Keysight/Agilent/HP VXI to PXI Switching Cross-Reference (continued)

Keysight/Agilent/HP Legacy VXI Module				Equivalent Pickering PXI Module		
Switch Type	Part No.	Config.	Specification	Part No.	Config.	Specification
RF	E1475A	6, 1x4, 75Ω RF MUX Extender	Max Voltage: 42V , Max Current: 1A DC/ 1AAC Peak, Max Power: 24W/ 24VA	40-832-004	Quad 1x4 75Ω RF Multiplexer (not a MUX extender)	Max Voltage: 30V Max Current: 1A Max Power: 10W B/W: 3GHz
Microwave	E1389A	Microwave Switch Driver (can drive 3 internal and 3 external microwave switches of different specifications)	Various	40-785B-xxx-E	1, 2 or 3 Remote 6:1 Multiplexers	Various

Pickering VXI to PXI Switching Cross-Reference

Pickering Legacy VXI Module				Equivalent Pickering PXI Module		
Switch Type	Part No.	Config.	Specification	Part No.	Config.	Specification
Matrix	30-510A	88x8, 1-Pole, 2-Pole or 1-Pole Screened	Max Voltage: 100VDC Max Current: 1A hot, 1.2A cold Max Power: 10W	40-562A-021-88x8	88x8, 1-Pole	Max Voltage: 150VDC/100VAC Max Current: 1A hot, 1.2 cold Max Power: 20W
				40-562A-022-88x8	88x8, 2-Pole	
RF	30-725	8x9 Matrix	B/W: 100MHz (30-725) 400MHz (30-728), Impedance: 50 or 75Ω, Max Voltage: 100VDC, Max Current: 0.5A hot, 1.2A cold, Max Power: 10W (30-725)	40-725	8x9 Matrix	B/W: 500MHz, Impedance: 50 or 75Ω, Max Voltage: 100VDC, Max Power: 10W, Max Current: 0.5A hot/cold
	30-728	Dual 8x9 Matrix		40-725 (2 required)		
	30-745	Quad 8-Channel, Dual 16-Channel or Single 32-Channel Multiplexer	B/W: 2GHz Impedance: 50Ω Max Voltage: 100VDC Max Power: 10W Max Current: 0.1A hot/cold Insertion Loss: <2dB Isolation: >40dB Crosstalk: >50dB VSWR: <1:1.6	40-766-001	Quad 8-Channel, Dual 16-Channel or Single 32-Channel Multiplexer	B/W: 600MHz, Impedance: 50Ω, Max Power: 1W, Insertion Loss: <3dB Isolation: >70dB, Crosstalk: <-45dB, VSWR: <1.6:1
				40-875-001	Single 16-Channel Multiplexer	B/W: 3GHz, Impedance: 50Ω, Max Voltage: 30VDC, Max Current: 1A hot/cold, Insertion Loss: <1.3dB, Isolation: >38dB, Crosstalk: <-40dB, VSWR: <1.4:1
				40-874-002	Dual 8-Channel Multiplexer	B/W: 3GHz, Impedance: 50Ω, Max Voltage: 30VDC, Max Current: 1A hot/cold, Insertion Loss: <1.2dB, Isolation: >38dB, Crosstalk: <-37dB, VSWR: <1.2:1
	30-750	8x4 Matrix	B/W: 1.5GHz Impedance: 50Ω Max Voltage: 100VDC Max Power: 10W Max Current: 0.1A hot/cold Insertion Loss: <4.5dB Isolation: >65dB Crosstalk: >55dB VSWR: <1:1.8	40-877-002 (4 modules required)	Dual 2x2 Matrix	B/W: 2.5GHz, Impedance: 50Ω, Max Voltage: 30VDC, Max Current: 1A hot/cold, Insertion Loss: <1.4dB, Isolation: >32dB, Crosstalk: <-32dB, VSWR: <1.5:1
40-729-001				8x4 Matrix	B/W: 300MHz, Impedance: 50Ω, Max Voltage: 100VDC, Max Current: 0.5A hot/cold, Insertion Loss: <3dB, Isolation: >70dB, Crosstalk: <-45dB, VSWR: <2:1	
40-750-511 (2 modules required)				8x2 Matrix	B/W: 1.5GHz, Impedance: 50Ω, Max Voltage: 60VDC, Max Current: 0.1A hot/cold, Insertion Loss: <3dB, Isolation: >50dB, Crosstalk: <-35dB, VSWR: <1.8:1	
Microwave	30-787	4x4 Matrix	B/W: 10GHz, Impedance: 50Ω, Max Voltage: 100VDC, Max Power: 100W	No Equivalent	—	—
Telecoms Daisy Chain Tributary Switch	30-790/791	8 to 16-Channel, 75Ω	Max Voltage: 10VDC/AC, Max Power: 10W Max Current: 0.5A hot/cold (Note: 30-791 has an extra multiplexer circuit that is not available in PXI)	No Equivalent	—	—
	30-792			40-793-701	16-Channel, 75Ω	Max Voltage: 100VDC/AC Max Power: 30W Max Current: 1.0A hot/cold
	30-796			40-796-001 (2 modules required)	8-Channel, Balanced	

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